

Double-chamber cartridge system		Epoxy resins DELO®-DUOPOX							Polyurethanes DELO®-PUR				
Simple processing of two-component adhesives													
	fast curing	✓	✓	✓					✓	✓	✓		
	multi-purpose	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
	elastic / tension-equalizing	✓	✓	✓	✓	✓			✓		✓	✓	
	very high strengths						✓	✓	✓				
	high temperature of use						✓	✓	✓	✓			
	for large gaps			✓				✓	✓	✓	✓	✓	
	good flow behavior	✓	✓		✓	✓	✓		✓				
Product code number		02 rapid	03 rapid	03 rapid ^{thix}	AD821	AD850	AD894	AD895	AD897	9691	9692	9694	9895
Color cured product		yellowish transparent	yellowish transparent	yellowish transparent	yellowish transparent	brown	black	gray	gray	black	black	black	light beige
Mixing ratio	A:B according to weight	1:1	1:1	1:1	0,58:1	1.97:1	7:3	7:3	7:3	1:1	1:1	1:1	1:1
	A:B according to volume	1:1	1:1	1:1	1:2	2:1	2:1	2:1	2:1	1:1	1:1	1:1	1:1
Viscosity [mPas] (+23 °C ± 73 °F) mixture		12,000 (± cP)	15,000 (± cP)	38,000 (± cP)	21,000 (± cP)	60,000 (± cP)	16,000 (± cP)	90,000 (± cP)	pasty	80,000 (± cP)	pasty	pasty	pasty
Processing time [min] at room temperature	3 g preparation	6	3	3	18	20	47	37	34	10	8	20	30
	100 g preparation	–	–	–	20	15	45	30	30	4	5	7	30
Curing conditions	firmness to touch 1 – 2 MPa (at rt / at +80 °C ± 176 °F)	12 min / –	11 min / –	13 min / –	5.5 h / 12 min	5 h / 13 min	5 h / –	5.5 h / –	6 h / –	90 min / –	30 min / –	2 h / –	7 h / –
	functional strength (at rt/at +80 °C ± 176 °F)	24 h / 15 min	2 h / 5 min	2 h / 5 min	24 h / 30 min	12 h / 22 min	7 h / 16 min	8 h / 18 min	8 h / 17 min	6 h / ¹⁾	2 h / ¹⁾	8 h / ¹⁾	72 h / ¹⁾
	final strength (at rt / at +80 °C ± 176 °F)	72 h / 1 h	24 h / 40 min	24 h / 1 h	7 d / 70 min	48 h / 40 min	24 h / 30 min	24 h / 30 min	24 h / 25 min	72 h / ¹⁾	72 h / ¹⁾	72 h / ¹⁾	72 h / ¹⁾
Tensile shear strength [MPa] Al/Al sand-blasted	DIN EN 1465; 1.6 mm	18 (± 2,610 psi)	13 (± 1,885 psi)	13 (± 1,885 psi)	14 (± 2,030 psi)	15 (± 2,175 psi)	19 (± 2,755 psi)	19 (± 2,755 psi)	17 (± 2,465 psi)	12 (± 1,740 psi)	16 (± 2,320 psi)	13 (± 1,885 psi)	13 (± 1,885 psi)
	DIN EN 54451; 6 mm	16 (± 2,320 psi)	16 (± 2,320 psi)	17 (± 2,465 psi)	13 (± 1,885 psi)	17 (± 2,465 psi)	31 (± 4,495 psi)	32 (± 4,640 psi)	32 (± 4,640 psi)	13 (± 1,885 psi)	23 (± 3,335 psi)	14 (± 2,030 psi)	12 (± 1,740 psi)
Storage life after delivery in unopened original containers at room temperature		12 months	12 months	12 months	6 months	6 months	6 months	12 months	12 months	6 months	6 months	6 months	6 months
Container sizes of double chamber cartridges [ml] packing units		5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50	5 x 50
		5 x 200	5 x 200	–	–	–	5 x 200	5 x 200	5 x 200	–	–	5 x 200	5 x 200
Materials		glass, plastic, metal, ceramic	plastic, metal, ceramic	metal, ceramic	plastic, metal, ceramic	plastic, metal, ceramic	metal, ceramic	plastic, metal, ceramic, wood	metal, ceramic	plastic, metal, ceramic	metal, ceramic	glass, plastic, metal, ceramic, wood	glass, plastic, metal, ceramic
Application examples		casting of small hollows	bonding of small components	bonding and sealing of housings	casting of small components bonding of larger components	bonding of different metal and plastic types	casting and bonding of components	bonding and coating cell test USP 28 ISO 10993-5	coating and trowelling	casting of sensors and small components	bonding of housings	sealing of housings authorization for ship industry	bonding and sealing of plastic cell test USP 28 ISO 10993-5
Basic properties and advantages of all products		highly reliable connections, mainly with dissimilar material combinations, multi-purpose, solvent-free, low curing shrinkage, very good temperature and chemical resistance, curing without increased temperatures (however, the curing time can be accelerated by heat)											

Product description

DELO®-DUOPOX are two-component epoxy resins and DELO®-PUR are two-component polyurethanes curing at room temperature (rt) after mixing the two components in the ratio indicated.

The products can be processed from double chamber cartridges with a static mixing tube similar to one-component products.

Standard temperature range

The products are normally used at temperatures of up to +80 °C (± 176 °F) resp. +140 °C (± 284 °F). Therefore, the suitability of the respective adhesive for the intended temperature range of use must be tested according to the application before use. You can find details on the behavior of the products under the influence of elevated temperatures in the respective technical data sheet.

Processing

- Resin and hardener are filled in double chamber cartridges in the correct volume mixing ratio.
- With the dispensing guns DELO®-XPRESS for manual or pneumatic operation, the two components are pressed out of the cartridge without great effort. The mixing tube attached to the cartridge serves for homogeneous mixing and exact dispensing. When following the instructions for use, mixing errors are excluded. No further utensils are necessary and neat application is enabled.
- Please pay attention to the respective instructions for use, as well.

Curing

- Curing proceeds at room temperature; increased temperatures accelerate curing
- When mixing the components, the period of time available for processing the product starts
- Details: see technical data sheets

Surface pretreatment

The surfaces to be bonded must be free of oil, grease, separating agents and other contaminations. We recommend our DELOTHEN cleaners. After cleaning, adhesion can be further improved by surface pretreatment.

Further information

You can find more details on type-specific properties in the technical data sheets and material safety data sheets.

Our Engineering Department will be pleased to support you in technical application tests and questions resulting from processing DELO® products.

¹⁾ The curing time can be approx. halved by increasing the temperature to +80 °C (± 176 °F)



DELO®-DUOPOX

Epoxy resins
two-component · cold-curing · high-strength to elastic

DELO®-PUR

Polyurethanes
two-component · cold-curing · tough-elastic

Selection Chart Double-chamber cartridge system

08/09

DELO®-PHOTOBOND®	1-component acrylates UV-curing · light-curing
DELO®-KATIOBOND®	1-component epoxies UV-curing · light-activated
DELO®-DUALBOND	1-component epoxies light-curing · heat-curing
DELO®-MONOPOX®	1-component epoxies heat-curing
DELO®-DUOPOX	2-component epoxies cold-curing
DELO®-ML	1-component methacrylates anaerobic-curing
DELO®-CA	1-component cyanoacrylates fast-curing
DELO®-GUM	1-component silicones highly flexible
DELO®-PUR	2-component polyurethanes cold-curing · tough-elastic
DELOTHEN	Cleaners CFC-free
DELOMAT	Dispensing units precise
DELOLUX®	Curing lamps intensive

Our selection charts are a technical selection aid giving an overview of various product variants. We will be pleased to provide you with sales details, such as available container sizes, stock availability and minimum order quantities, on request.

The data and information provided are based on tests performed under laboratory conditions. Reliable information about the behavior of the product under practical conditions and its suitability for a specific purpose cannot be concluded from this. Many product properties are dependent on the temperature and can permanently change especially at increased temperatures. It is the user's responsibility to test the suitability of the product for the intended purpose and temperature range by considering all specific requirements. Type and physical and chemical properties of the materials to be processed with the product, as well as all actual influences occurring during transport, storage, processing and use, may cause deviations in the behavior of the product compared to its behavior under laboratory conditions. All data provided are typical average values or uniquely determined parameters measured under laboratory conditions. The data and information provided are therefore no guarantee for specific product properties or the suitability of the product for a specific purpose.

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DELO® dispensing guns for 50 ml double chamber cartridges

- DELO®-XPRESS 902
manual operation; for 1:1 and 2:1 cartridges
- DELO®-XPRESS 903
pneumatic operation; for 1:1 cartridges
- DELO®-XPRESS 907
pneumatic operation; for 1:1 and 2:1 cartridges

DELO® dispensing gun for 200 ml double chamber cartridges

- DELO®-XPRESS 905
pneumatic operation; for 1:1 and 2:1 cartridges



Simple mixing and dispensing by means of DELO®-XPRESS 902



DELO®-XPRESS 903

DELO®-XPRESS 907

DELO®-XPRESS 905

Mixing tubes and accessories

- Mixing tube 050 short
for 50 ml double chamber cartridges
with clip-on nozzle for especially precise dispensing
- Mixing tube 050 universal
for 50 ml double chamber cartridges
luer-cone, attaching of dispensing tips is possible
- Mixing tube 200 short
for 200 ml double chamber cartridges
- Mixing tube 200 long
for 200 ml double chamber cartridges
dispensing tips can be attached to this mixing tube
- Euro cartridge adapter
for the dispensing with Euro cartridge dispensing guns